

What is claimed:

1. An analyte monitoring device having a housing, the device comprising:
  - a. a plurality of needles, each having a tip, a retracted position, a position wherein the tip is extended from the housing a distance adapted to pierce skin;
  - 5 b. an electrically or spring powered needle pushing apparatus movable to separately engage each of the needles to move each from the retracted position to the extended position;
  - c. an energy source located within the housing;
  - d. a plurality of analysis sites comprising an analysis preparation, each adapted to receive liquid from the needles to wet the analysis preparation;
  - 10 e. one or more light sources adapted to direct light at the analysis sites;
  - f. one or more light detectors adapted to receive light from the analysis sites; and
  - g. a processor.
- 15 2. The analyte monitoring device of claim 1, wherein elements a and d can be replaceably inserted into the analyte monitoring device as part of a cassette.
3. The analyte monitoring device of claim 1, wherein the housing cannot be reversibly opened such that the analyte monitoring device is disposable.
- 20 4. The analyte monitoring device of claim 1, wherein elements a, b and c are within the housing, and wherein the housing cannot be reversibly opened such that the device is adapted for disposable use.
- 25 5. The analyte monitoring device of claim 1, further comprising:
  - h. a Rf or IR signaling transmitter adapted for communicating with a second, external processor.
6. An analyte monitoring device having a housing, the device comprising:
  - 30 (a) a plurality of needles, each having a tip, a retracted position, a position wherein the tip is extended from the housing a distance adapted to pierce skin;

- (b) an electrically or spring powered needle pushing apparatus movable to separately engage each of the needles to move each from the retracted position to the extended position;
- (c) an energy source located within the housing;
- 5 (d) a plurality of evacuated sites, each adapted to engage an associated needle during or following needle movement to apply the vacuum to the needle while it is in an extended position; and
- (e) a processor.

10 7. The analyte monitoring device of claim 6, wherein the device has a housing adapted to not be re-openable such that the energy source is not replaceable or rechargeable.

15 8. An analyte monitoring device having a housing, the device comprising:  
one or more needles, each having a tip, a retracted position, a position wherein the tip is extended from the housing a distance adapted to pierce skin;  
and  
a light source fixed to the housing aligned to heat a tissue aligned to intercept the  
20 extended positions of the needles.